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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/073,347	02/13/2002	Shuji Yonekubo	Q68498	6061

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EXAMINER

NGUYEN, LAM S

ART UNIT	PAPER NUMBER
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2853

DATE MAILED: 09/25/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/073,347

Applicant(s)

YONEKUBO, SHUJI

Examiner

LAM S NGUYEN

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 03 February 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7, 12-32, 38 and 39 is/are rejected.
- 7) ☒ Claim(s) 8-11 and 33-37 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-7, 12-32, and 38-39 are rejected under 35 U.S.C. 102(b) as being anticipated by Numata et al. (US 5625384).

Numata et al. disclose a liquid jetting apparatus (FIG. 75) comprising;

a container-setting portion (FIG. 75, element 9) at which a liquid container (FIG. 75, element 8a) is set, the liquid container having a liquid chamber (column 43, line 45: in term of “ink tank”) that contains liquid,

a head member having a nozzle (FIG. 48A-B),

a liquid way that can communicate with the liquid chamber of the liquid container set at the container-setting portion and the nozzle (FIG. 75: a corresponding way provides ink from the tank 8a to the nozzle),

a liquid discharging unit that can cause the liquid to be discharged from the nozzle (column 43, line 45-48: a corresponding discharge unit for sucking ink), and

a liquid discharging controller that can control the liquid discharging unit based on information about sedimentation-state of the liquid in the liquid chamber (column 43, line 43-50: a corresponding discharging controller controls the sucking of ink in a recovery operation based on the concentration of the ink in the connected portion between the ink tank and the head cartridge).

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**Referring to claims 22, 27, 32, 39:** further comprising a liquid discharging unit that can cause the liquid to be discharged from the nozzle, and a main controlling part that can estimate the sedimentation-state based on the information about a point of time that is a standard for judgement of the sedimentation-state and information about easiness of sedimentation of the sinkable constituent in the liquid, and that can control the liquid discharging unit based on the estimated sedimentation-state (column 43, line 43-50: a corresponding discharging controller controls the sucking of ink in a recovery operation based on the concentration of the ink in the connected portion between the ink tank and the head cartridge).

**Referring to claims 2-4, 18-20, 24-25, 29-30:** further comprising a clock component that knows a present time, and a sedimentation-state acquiring unit that can acquire the information about sedimentation-state of the liquid in the liquid chamber, wherein the information about sedimentation-state of the liquid in the liquid chamber is information about a point of time that is a standard for judgement of the sedimentation-state, the liquid discharging controller has: a calculating part that can calculate a passed time until the present time based on the information about a point of time that is a standard for judgement of the sedimentation-state, and a main controlling part that can control the liquid discharging unit based on the passed time, and the point of time that is a standard for judgement of the sedimentation-state is a date when the liquid container was manufactured (column 43, line 38-50: the type of recovery operation to be performed is decided by the number of months between the manufacturing date and the loading data).

**Referring to claims 5, 23:** wherein the point of time that is a standard for judgement of the sedimentation-state is a point of time when the liquid container was set

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at the container-setting portion (column 43, line 62-65: the time that the cartridge is unpacked and loaded in the apparatus).

**Referring to claims 6, 17:** wherein the information about the point of time when the liquid container was set at the container-setting portion is stored in a storage unit provided in the liquid container, and the sedimentation-state acquiring unit is adapted to read out the information stored in the storage unit (column 9, line 57-62: the time when the new head is used first is written in a non-volatile memory and a corresponding unit reads this memory to acquire this information).

**Referring to claims 7, 28:** wherein the point of time that is a standard for judgement of the sedimentation-state is a point of time when the liquid was jetted previous time (FIG. 6, steps S505-506: a period of time is set since the last suction or last pre-discharge).

**Referring to claims 12-13:** wherein the liquid discharging unit is a cleaning unit that can cause the liquid to be absorbed from the nozzle or a flushing unit that can cause the liquid to be jetted from the nozzle (FIG. 6: a cleaning unit for suctioning).

**Referring to claim 14:** wherein the liquid container contains the liquid by containing a foam material filled with the liquid (column 40, line 23-27).

**Referring to claim 15:** wherein the liquid contained in the liquid container is ink including pigment (column 40, line 14-16: in term of “dye”).

**Referring to claims 16, 38:** wherein the liquid container further has a second liquid chamber that contains second liquid, the head member further has a second nozzle, the apparatus further comprises a second liquid way that can communicate with the second liquid chamber of the liquid container set at the container-setting portion and the

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second nozzle, the apparatus further comprises a second liquid discharging unit that can cause the second liquid to be discharged from the second nozzle, and the liquid discharging controller can control the second liquid discharging unit based on information about sedimentation-state of the second liquid in the second liquid chamber (FIG. 73: element 8 has more than one ink container).

**Referring to claims 21, 26, 31:** wherein the main controlling part is adapted to control the liquid discharging unit when the liquid container is replaced with a new liquid container in such a manner, that a volume of the liquid to be initially discharged is larger when the passed time calculated based on the information about sedimentation-state of the liquid in the liquid chamber of the new liquid container set at the container-setting portion is longer (column 43, line 37-50: Because the longer the passed time is, the higher the concentration of the ink in the connected portion, the amount of ink sucked is increased to ensure stable discharge).

***Allowable Subject Matter***

2. Claims 8-11, 33-37 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

**Referring to claim 9:** The most pertinent art Numata et al. (US 5625384) fails to disclose the comprising of a liquid-end determining unit that can determine a liquid end based on the information about a point of time that is a standard for judgement of the sedimentation-state and the liquid consumption.

**Referring to claims 8 and 33:** The most pertinent art Numata et al. (US 5625384) fails to disclose wherein the point of time that is a standard for judgement of

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the sedimentation-state is a point of time when the liquid container was stirred previous time.

Claims 10-11 and 34-37 are allowable because they depend directly/indirectly on claims 9 and 33.

***Response to Arguments***

Applicant's arguments with respect to claims 1 and 17 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LAM S NGUYEN whose telephone number is (703)305-3342. The examiner can normally be reached on 7:00AM - 3:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, STEPHEN D. MEIER can be reached on (703)308-4896. The fax phone numbers for the organization where this application or proceeding is assigned are (703)305-3431 for regular communications and (703)305-3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.

LN

September 10, 2003



**Stephen D. Meier**  
**Primary Examiner**